Amendments to the Specification:

Please replace paragraph [0055] with the following amended paragraph:

[0055] ~~Figure 9 illustrates~~ Figures 8, 9, and 10 illustrate an exemplary configuration of an electronics system 59 in which a plurality of integrated circuits 60(1)-60(x) each have four transceivers 62(1)-(x). The plurality of integrated circuits 60(1)-60(x) are mounted on a surface 65 of a printed circuit board 66. Embedded within the printed circuit board (and shown in dashed-outline form in ~~Figure 5~~ Figure 9) are four transmission lines 76. As discussed above, the transmission lines 76 may alternatively be formed on the printed circuit board 66. Each of the four electromagnetic couplers 68 on each of the plurality of integrated circuits 60(1)-60(x) is coupled to one of the transmission lines 76. Preferably, each of electromagnetic couplers ~~62(1)-62(x)~~ 68(1)-68(x) are disposed within approximately five millimeters of the its corresponding transmission line 76. The invention is not limited, however, to placement of any electromagnetic coupler ~~62~~ 68 within five millimeters of a transmission line 76. In this manner, transmission lines 76 form a four-path, bus-like structure in which the plurality of integrated circuits 60(1)-60(x) can contactlessly communicate with each other over the bus-like structure.

Please replace paragraph [0057] with the following amended paragraph:

[0057] As described above, the contactless communication paths in electronics system 10 of Figure 9 may optionally be fully or partially shielded. Figure 10 illustrates an exemplary embodiment with partial shielding of the electronics system 59 illustrated in Figure 9. As shown in Figure 10, a shielding plane 69 shields the circuitry on integrated circuit 60 from the four electromagnetic couplers 68 of integrated circuit 60. Each of the four transceivers 62 in integrated circuit 60 are electrically connected to an electromagnetic coupler 68 on the integrated circuit 60 through vias 67 extending though separate gaps in a shielding plane 69. Additional shielding may be provided by shielding planes or traces 80 disposed between transmission lines 76, and still further shielding may be provided by shielding planes 74 and 78, between which transmission lines 76 are located as illustrated in ~~Figure 6~~ Figure 10. If shielding plane 74 is included, gaps 72 in shielding plane 74 between each electromagnetic coupler 68 and each transmission line 76 are included in shielding plane 74. Integrated circuit 60 can then be positioned on printed circuit board 66 so that its electromagnetic couplers 68 are electromagnetically coupled to the transmission lines 76 through the gaps 72.

Please replace paragraph [0064] with the following amended paragraph:

[0064] As shown in Figure 13, an integrated circuit 90 may be configured with a transmitting coupler 102 and a separate receiving coupler 98 adapted for communicating through an electromagnetically coupled ring or token ring bus. Integrated circuit ~~90~~ 190 may also include a logic circuit ~~92~~ 93 communicating via an input/output interface 94. A receiver 96 demodulates an RF signal arriving on electromagnetic coupler 98 to produce an input signal 95 to input/output interface 94. Typically, the input signal 95 conveys data transmitted by another element that is electromagnetically coupled to the ring bus. If the data is addressed to integrated circuit 90, input/output interface 94 passes the data to logic circuit 93. Otherwise input/output interface 94 encodes the data into an output signal 97 and passes it to transmitter 100. Transmitter 100 supplies an RF signal modulated by the output signal 97 to an electromagnetic coupler 102.

Please replace paragraph [0066] with the following amended paragraph:

[0066] Figure 14 is a simplified cross-sectional view of a printed circuit board 104 holding several integrated circuits ~~90~~ 190 similar to integrated circuit ~~90~~ 190 of Figure 13. Separate short traces 106 embedded in or located on the printed circuit board 104 electromagnetically couple pairs of couplers 98 and 102 on adjacent integrated circuits ~~90~~ 190. Shielding such as that discussed above with respect to other embodiments of the invention may also be included. For example, a shielding plane 108 may shield traces 106 from one another. Although not shown in Figure 14, printed circuit board ~~90~~ 104 may also include shielding planes above and below traces 108, and integrated circuit ~~90~~ 190 may include a shielding plane above electromagnetic couplers 98 and 102 and below the circuits implemented on the substrate of integrated circuit ~~90~~ 190 to provide shielding.

Please replace paragraph [0068] with the following amended paragraph:

[0068] Figures 15-16 illustrate an exemplary embodiment of the invention in which integrated circuits contactlessly communicate directly with each other. As shown in Figure 15 (a cross-sectional side view), a plurality (in this example three) of integrated circuits 112(1)-112(3) are vertically stacked. For example integrated circuit 112(3) might include a computer processor and integrated circuits 112(1) and 112(3) might implement memories the processor accesses. Each integrated circuit 112(1)-112(3) includes a substrate 116 in which is formed circuitry. For example, the circuitry might include a logic circuit, an input/output interface, and a transceiver or transceivers configured in an arrangement similar to that of integrated circuit 14 of Figure 4, integrated circuit 60 of Figure 8, or integrated circuit ~~90~~ 190 of Figure 13. The transceiver in each integrated circuit 112(1)-112(3) is connected to a corresponding electromagnetic coupler 118(1)-118(3), which is preferably formed on or within substrate 116. Electromagnetic couplers 118(1)-118(3) are located in proximity with each other so as to be electromagnetically coupled with one another. In this manner integrated circuits 112(1)-112(3) communicate with each other contactlessly through the silicon without requiring vias or conductive vertical elements to interconnect the stacked dice.

Please replace paragraph [0070] with the following amended paragraph:

[0070] Alternatively, each integrated circuit 112(1), 112(2), 112(3) could be disposed (and or shielded) such that its electromagnetic coupler 118(1), 118(2), 118(3) is electromagnetically coupled only to the electromagnetic coupler of the integrated circuit immediately above and/or below. A communications protocol such as that described above with respect to Figures 13 and 14 could be used. For example, upon receiving a transmission from a neighbor, an integrated circuit 118 decodes the destination address of the transmission. If the transmission is addressed to the integrated circuit, the integrated circuit decodes and processes the data in the transmission. If, however, the transmission is not addressed to the integrated circuit, the integrated circuit forwards the transmission to its other neighbor.

Please replace paragraph [0072] with the following amended paragraph:

[0072] As illustrated in Figure 15, the stacked integrated circuits 112(1)-112(3) may optionally be mounted on a printed circuit board 114. The stacked integrated circuits 112(1)-112(3) may make conventional physical contact type electrical connections with printed circuit board 114. Alternatively, the stacked integrated circuits 112(1)-112(3) may communicate contactlessly with the printed circuit board 114. Such an arrangement is illustrated in Figure 15. There the integrated circuit 112(3) communicates contactlessly with the printed circuit board 114, and the printed circuit board includes optional shielding in accordance with the shielding principles discussed above. As also illustrated in Figure 15, power and ground connectors 115 may be included to provide power, ground, and reference voltage connections to the integrated circuits ~~118(1)-118(3)~~ 112(1), 112(2), 112(3).

Please replace paragraph [0076] with the following amended paragraph:

[0076] As with the "stacked" integrated circuit embodiment illustrated in Figure 15 above, the dual-sided embodiment illustrated in Figure 16 may be mounted on a printed circuit board 146. As discussed above with regard to Figure 15, conventional physical contact structures may be used to communicate with the printed circuit board 146, or contactlessly coupling in accordance with the instant invention may be used. Figure 16 illustrates the ~~later~~ latter with optional shielding planes 302, 304 for shielding transmission line 148. Gap 306 is provided in shielding plane 302 to allow coupler 140 to couple to transmission line 148. As discussed above, additional shielding could be added to more fully shield trace 148.

Please replace paragraph [0079] with the following amended paragraph:

[0079] Figures 17a to 17c illustrate exemplary arrangements in which two or more integrated circuits are arranged with a direct wireless communication path or channel between two or more integrated circuits. The integrated circuits may be mounted on a printed circuit board (not shown) or other substrate or frame suitable for securing integrated circuits. In these exemplary arrangements, an electromagnetic coupler is formed on an outer edge of the integrated circuit. In Figure 17a, integrated circuits 600 and 604 are arranged such that they can wirelessly communicate with each other. In Figure 17b, three integrated circuits 610, 614, ~~418~~ 618 are arranged such that each is able to wirelessly communicate with the other. In Figure 17c, one integrated circuit 630 includes four electromagnetic couplers, each arranged to be electromagnetically coupled to one of integrated circuits ~~634-646~~ 634, 638, 642, 646.